

IN THE CLAIMS:

The following listing of the claims replaces and supersedes all prior claim listings.
Please amend the claims as set out below.

1. (Currently Amended) A method, performed by a processor, for generating a graphical representation of a processing web by an oscilloscope to represent processing apparatuses of the oscilloscope in the data flow processing of waveform signals by said oscilloscope and to control the oscilloscope to begin processing of received waveform signals, said method comprising the steps of:

dynamically determining by said processor, as a function of changing functionalities and capabilities of a first processing apparatus, a first processing element of said processing web corresponding to a said first processing apparatus of the oscilloscope for processing a received waveform signal;

dynamically placing said first processing element in a particular location based at least in part upon its location in said processing web, operating capabilities of and various inputs to and outputs from said first processing element;

dynamically determining by said processor, as a function of changing functionalities and capabilities of a second processing apparatus, a second processing element of said processing web corresponding to a said second processing apparatus of the oscilloscope for processing a received waveform signal;

dynamically placing said second processing element in a particular location downstream from said first processing element based at least in part upon its location in said processing web, various inputs to and outputs from said second processing element, and an operating relationship

between said second processing element and said first processing element, each of said first and second processing elements having at least one input pin and at least one output pin, and each processing element being adapted to receive a waveform signal at its input pin, to process the received waveform signal, and to forward the processed waveform signal from its output pin to a downstream processing element; and

dynamically graphically connecting at least one output pin of said first processing element to one input pin of said second processing element after said first and second processing elements have been placed at their respective locations in said processing web .

2. (Previously Presented) The method of claim 1, wherein said connecting step connects an output pin of said first processing element to an input pin of said second processing element in accordance with the data flow processing of said oscilloscope.

3. (Previously Presented) The method of claim 2, wherein said connecting step generates a line in said graphical representation between said output pin of said first processing element to said input pin of said second processing element.

4. (Original) The method of claim 3, wherein said line is drawn including one of a plurality of designations based upon a type of data being carried thereon.

5. (Original) The method of claim 4, wherein said plurality of designations are colors.

6. (Original) The method of claim 1 wherein said at least one pin of said first processing

element and said at least one pin of said second processing element are coded based upon a type of data to output therefrom, or received thereby, respectively.

7. (Original) The method of claim 6, wherein said coding is by color.

8. (Original) The method of claim 6, wherein said coding is by symbol.

9. (Original) The method of claim 6, wherein said coding is by graphical designation.

10. (Original) The method of claim 1, wherein said first processing element is updated at a faster rate and said second processing element is updated at a slower rate.

11. (Previously Presented) The method of claim 10, wherein said update of said first processing element and update of said second processing element are synchronized.

12. (Previously Presented) The method of claim 10, wherein said update of said first and second processing elements is controlled by an update processing element.

13. (Original) The method of claim 1, wherein a viewing object may be placed at any location on the graphical representation to see a current, live output at that location.

14. (Currently Amended) A method, performed by a processor, for generating a graphical representation of a processing web by an oscilloscope to represent processing apparatuses of the

oscilloscope in the data flow processing of waveform signals by said oscilloscope and to control the oscilloscope to begin processing of received waveform signals, said method comprising the steps of:

dynamically determining by said processor, as a function of changing functionalities and capabilities of a first processing apparatus, a first processing element of said processing web corresponding to a said first processing apparatus of the oscilloscope for processing a received waveform signal;

dynamically placing said first processing element in a particular location based at least in part upon its function and various inputs to and outputs from said first processing element;

dynamically determining by said processor, as a function of changing functionalities and capabilities of a second processing apparatus, a second processing element of said processing web corresponding to a said second processing apparatus of the oscilloscope for processing a received waveform signal;

dynamically placing said second processing element in a particular location downstream from said first processing element based at least in part upon its function, various inputs to and outputs from said second processing element, and an operating relationship between said second processing element and said first processing element, each of said first and second processing elements having at least one input pin and at least one output pin, and each processing element being adapted to receive a waveform signal at its input pin, to process the received waveform signal, and to forward the processed waveform signal from its output pin to a downstream processing element; and

dynamically graphically connecting said first processing element to said second processing element after said first and second processing elements have been placed at their respective locations in said processing web, indicating the flow of data therebetween;

wherein said first processing element is a waveform acquisition processing element; and wherein said second processing element is a display processing element.

15. (Currently Amended) The method of claim 14, further comprising the steps of:

dynamically determining by said processor, as a function of changing functionalities and capabilities of a third processing apparatus, a third processing element of said processing web corresponding to a said third processing apparatus of the oscilloscope for processing a signal; and

dynamically placing said third processing element in a particular location downstream from said first processing element and upstream from said second processing element based at least in part upon its function in said processing web, various inputs to and outputs from said second processing element, and an operating relationship between said third processing element and said first and second processing elements so that the processed waveform signal processed by the first processing element is forwarded to and processed by the third processing element, and the processed waveform signal processed by the third processing element is forwarded to the second processing element;

wherein said third processing element performs an intermediate processing step on the processed waveform signal between said first processing element and said second processing element in response to a request for processing from said second processing element.

16. (Currently Amended) The method of claim 14, further comprising the steps of:

dynamically determining by said processor, as a function of changing functionalities and capabilities of a third processing apparatus, a third processing element of said processing web corresponding to a said third processing apparatus of the oscilloscope for processing a signal;

dynamically placing said third processing element in a particular location downstream from said first processing element and upstream from said second processing element based at least in part upon its function in said processing web, various inputs to and outputs from said second processing element, and an operating relationship between said third processing element and said first and second processing elements;

wherein said third processing element is a static memory input.

17. (Currently Amended) The method of claim 14, further comprising the steps of:

dynamically determining by said processor, as a function of changing functionalities and capabilities of a third processing apparatus, a third processing element of said processing web corresponding to a said third processing apparatus of the oscilloscope for processing a signal;

dynamically placing said third processing element in a particular location downstream from said first processing element and upstream from said second processing element based at least in part upon its function in said processing web, various inputs to and outputs from said second processing element, and an operating relationship between said third processing element and said first and second processing elements;

wherein said third processing element is a display trace output including at least one processing function.

18. (Currently Amended) The method of claim 14, further comprising the steps of:

dynamically determining by said processor, as a function of changing functionalities and capabilities of a third processing apparatus, a third processing element of said processing web corresponding to ~~a~~ said third processing apparatus of the oscilloscope for processing a signal;

dynamically placing said third processing element in a particular location downstream from said first processing element and upstream from said second processing element based at least in part upon its function in said processing web, various inputs to and outputs from said second processing element, and an operating relationship between said third processing element and said first and second processing elements;

wherein said third processing element is a parameter output.

19. (Original) The method of claim 14, wherein said connection between said first processing element and said second processing element is provided in a color indicative of the type of data flowing therebetween.

20. (Original) The method of claim 14, wherein each of said first and second processing elements includes an indication of the number of inputs and outputs thereof.

21. (Original) The method of claim 14, wherein said inputs and outputs are provided in a color indicative of the type of data to be received or output thereon.

Claims 22-44 (Cancelled)

45. (Currently Amended) A-Apparatus for dynamically generated-generating a graphical representation of a processing web by an oscilloscope to-that represent processing apparatuses of the oscilloscope in the data flow processing of waveform signals by said oscilloscope and to-that control the oscilloscope to begin processing received waveform signals, comprising:

means for providing a first processing element of said processing web corresponding to a first processing apparatus of the oscilloscope for processing a received waveform signal, said first processing element being placed in a particular location based at least in part upon its function and various inputs to and outputs from said first processing element;

means for providing a second processing element of said processing web corresponding to a second processing apparatus of the oscilloscope for processing a received waveform signal, said second processing element being placed in a particular location downstream from said first processing element based at least in part upon its function, various inputs to and outputs from said second processing element, and an operating relationship between said second processing element and said first processing element, each of said first and second processing elements having at least one input pin and at least one output pin, and each processing element being adapted to receive a waveform signal at its input pin, to process the received waveform signal and to forward the processed waveform signal from its output pin to a downstream processing element; and

a connection for connecting said first processing element to second processing element after said first and second processing elements have been placed at their respective locations in said processing web, indicating a flow of data therebetween;

wherein said first processing element is a waveform acquisition processing element; and wherein said second processing element is a display processing element; and

wherein said processing web adapts to changes in functions and capabilities of said oscilloscope.

46. (Currently Amended) The ~~dynamically generated graphical representation of the processing web apparatus~~ of claim 45, further comprising:

means for providing a third processing element of said processing web corresponding to a third processing apparatus of the oscilloscope for processing a received waveform signal, said third processing element being placed in a particular location downstream from said first processing element and upstream from said second processing element based at least in part upon its function in said processing web, various inputs to and outputs from said second processing element, and an operating relationship between said third processing element and said first and second processing elements so that the processed waveform signal processed by the first processing element is forwarded to and processed by the third processing element in response to a request for processing from said third processing element, and the processed waveform signal processed by the third processing element is forwarded to the second processing element in response to a request for processing from said second processing element;

wherein said third processing element performs an intermediate processing step between said first processing element and said second processing element.

47. (Currently Amended) The ~~dynamically generated graphical representation of the processing web apparatus~~ of claim 45, further comprising:

means for providing a third processing element of said processing web corresponding to a third processing apparatus of the oscilloscope for processing a received waveform signal, said

third processing element being placed in a particular location downstream from said first processing element and upstream from said second processing element based at least in part upon its function in said processing web, various inputs to and outputs from said second processing element, and an operating relationship between said third processing element and said first and second processing elements so that the processed waveform signal processed by the first processing element is forwarded to and processed by the third processing element in response to a request for processing from said third processing element, and the processed waveform signal processed by the third processing element is forwarded to the second processing element in response to a request for processing from said second processing element;

wherein said third processing element is a static memory input.

48. (Currently Amended) The ~~dynamically-generated graphical representation of the processing web apparatus~~ of claim 45, further comprising:

means for providing a third processing element of said processing web corresponding to a third processing apparatus of the oscilloscope for processing a received waveform signal, said third processing element being placed in a particular location downstream from said first processing element and upstream from said second processing element based at least in part upon its function in said processing web, various inputs to and outputs from said second processing element, and an operating relationship between said third processing element and said first and second processing elements so that the processed waveform signal processed by the first processing element is forwarded to and processed by the third processing element in response to a quest for processing from said third processing element, and the processed waveform signal

processed by the third processing element is forwarded to the second processing element in response to a request for processing from said second processing element;

wherein said third processing element is a display trace output including at least one processing function.

49. (Currently Amended) The ~~dynamically-generated-graphical-representation-of-the~~
~~processing-web apparatus~~ of claim 45, further comprising:

means for providing a third processing element of said processing web corresponding to a third processing apparatus of the oscilloscope for processing a received waveform signal, said third processing element being placed in a particular location downstream from said first processing element and upstream from said second processing element based at least in part upon its function in said processing web, various inputs to and outputs from said second processing element, and an operating relationship between said third processing element and said first and second processing elements so that the processed waveform signal processed by the first processing element is forwarded to and processed by the third processing element in response to a request for processing from said third processing element, and the processed waveform signal processed by the third processing element is forwarded to the second processing element in response to a request for processing from said second processing element;

wherein said third processing element is a parameter output.

50. (Currently Amended) The ~~dynamically-generated-graphical-representation-of-the~~
~~processing-web apparatus~~ of claim 45, wherein said connection between said first processing

element and said second processing element is provided in a color indicative of the type of data flowing therebetween.

51. (Currently Amended) The ~~dynamically-generated graphical representation of the processing web apparatus~~ of claim 45, wherein each of said first and second processing elements includes an indication of the number of inputs and outputs thereof.

52. (Currently Amended) The ~~dynamically-generated graphical representation of the processing web apparatus~~ of claim 51, wherein said inputs and outputs are provided in a color indicative of the type of data to be received or output thereon.

Claims 53-77 (Cancelled)